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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,220	10/24/2005	Tetsuo Oka	4495-089	8277
23429 7590 05/12/2008 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER BARRERA, RAMON M				
ART UNIT 2832		PAPER NUMBER		
MAIL DATE 05/12/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,220

Applicant(s)

OKA ET AL.

Examiner

RAMON M. BARRERA

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)
- Paper No(s)/Mail Date 10/24/05.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 10/24/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito, et al.(JP2001-068338) in view of Yoshida(US5008624).

Imura disclosed composite bulk superconductor 21 held in a vacuum vessel 20 that becomes a magnet by capturing a magnetic field in a superconductive condition, at least one pair of said vacuum vessels that are positioned at such a distance that the magnetic field generated from said composite bulks in each of said vacuum vessels affects each other, thus making a composite magnetic field (figs. 3,4,8); a vacuumizing apparatus for vacuumizing said vacuum vessel [paragraphs:21,22]; a cooling apparatus [19,20] for cooling said bulk superconductor below the superconductivity transition temperature so that said

bulk superconductors arc in superconductive condition; a magnetizing coil 25 generating a magnetic field for magnetizing said bulk superconductor, said magnetizing coil being a superconductor coil; wherein said composite bulk is held inside said vacuum vessel with a heat insulating structural members that are made of resin-based materials (styrene) [77]; wherein said cooling apparatus is constituted such that said composite bulk is thermally contacted with a cooling part of a freezer directly or indirectly via a heat conveying member 225 [0056]; wherein said freezer is an ultra-low temperature freezer of which constitution is a GM type, a pulse tube type [20] which inherently cools and maintains said composite bulk within a temperature range between 4K and 90K in absolute temperature, and are inherently located at such a separated position from said composite bulk that ferromagnetic members constituting said freezer can function well without being hindered by said magnetic field for magnetizing said bulk superconductors; wherein said bulk superconductors is a compound as claimed with a chemical expression $\text{REBa}_2\text{Cu}_3\text{O}_y$ [23,59].

Ito did not disclose said composite bulk composed of a plurality of said bulk superconductors being arranged substantially in parallel with each other nor wherein the magnetic pole planes thereof form an arc placed along a curved plane that forms a part of the surface of a cylinder or of a sphere. Yoshida in figs. 9 and 10 disclose a pair of bulk superconductor poles formed of a plurality (50/51) of said bulk superconductors being arranged substantially in parallel with each other and wherein the magnetic pole planes thereof form an arc placed

along a curved plane that forms a part of the surface of a cylinder or of a sphere for the purpose of optimizing the magnetic field in the gap between the poles. The superconductor having a plurality of crystals of which the c-axis is substantially aligned in the longitudinal direction of said column, an optimal orientation, is inherent. Since Ito and Yoshida are both from the same field of endeavor, the purpose disclosed by Yoshida would have been recognized in the pertinent art of Ito. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a plurality of bulk superconductors in Ito for the purpose of optimizing the magnetic field in the gap between the poles.

4. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (JP2001-068338) in view of Yoshida (US5008624), and further in view of Morita (JP11335120).

Ito in view of Yoshida did not disclose wherein each of said bulk superconductors is fit with a ring and placed in tight contact with said ring by using a resin. Morita disclosed fitting a bulk superconductor with a ring for the purpose of preventing breakage of the superconductor and disclosed placing a resin layer between the superconductor and ring for the purpose of uniformly distributing the stress of the ring. Since Ito, Yoshida, and Morita are all from the same field of endeavor, the purpose disclosed by Morita would have been recognized in the pertinent art of Ito in view of Yoshida. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ rings on Ito in view of

Yoshida's bulk superconductors for the purpose of preventing breakage of the superconductor.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMON M. BARRERA whose telephone number is (571)272-1987. The examiner can normally be reached on Monday through Friday from 11 to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ramon M Barrera/
Primary Examiner, Art Unit 2832

rmb